

Amendment under 37 C.F.R. § 1.111  
U.S. Application No. 09/914,155

Attorney Docket No. Q65084

IN THE DRAWINGS.

Applicant encloses as an Appendix 1 proposed new drawing sheet which includes a proposed drawing figure.

REMARKS

Claims 1-23 are all the claims pending in the application.

The rejection under 35 U.S.C. § 101.

*Non-statutory subject matter rejection*

The Examiner rejected the claims under 35 U.S.C. § 101 as being drawn to non-statutory subject matter. Applicant already pointed out that claim 1 is drawn to a stream of pulses, and that these are physical things (albeit ones that cannot be sensed by an unaided human).

The Examiner responded by alleging that “pulses are not processes, machines, manufactures or compositions of matter.” The Examiner is wrong. A stream of pulses is a manufacture. A manufacture is something made by people and their machines. A person can manufacture a figurine by carving wood with a knife, and can manufacture an artificial diamond by using an extensive array of machines and equipment. The thing that manufactures a stream of pulses is an appropriately equipped transmitter. Since the claimed stream of pulses is manufactured by using a transmitter, the stream of pulses is a manufacture. The statute does not require that a manufacture be tangible.

Since 35 U.S.C. § 101 provides that anyone who invents any new and useful manufacture may obtain a patent therefor, and since a stream of pulses according to Applicant's claims is a manufacture, section 101 provides no explicit basis in law for the Examiner to reject Applicant's claims.

Although section 101 is quite broad, there are certain exceptions that serve to remove from patentability certain things that would normally be thought of as falling within the boundaries of section 101. These long standing exceptions are well known, and have to be considered for this analysis.<sup>1</sup> One such example is the exception to naturally occurring

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<sup>1</sup> The Examiner would benefit by reviewing MPEP 2106(IV)(A), sixth paragraph in this regard: “The subject matter courts have found to be outside the four statutory categories of invention is limited to abstract ideas, laws of nature and natural phenomena.”

phenomena such as lightning. Lightning is not excluded from section 101 because it fails to fit within one of the statutory categories, but because it is a naturally occurring phenomenon.

Likewise, certain naturally occurring bacteria and organisms, although useful, are considered to be removed from the scope of section 101 by way of this exception.

Applicant's claimed stream of pulses does not occur naturally, and exists only by virtue of the invention and ingenuity of mankind. The stream of pulses exists only after manufacture by a transmitter. Thus, the well known exception to 35 U.S.C. § 101, that bars such phenomena as lightening from being patented, does not apply to the claimed invention.

The Examiner should therefore withdraw the aspect of this rejection that finds the claimed invention to be outside of the classes of inventions defined by 35 U.S.C. § 101.

*Single means aspect of the Examiner's rejection*

The Examiner made the statement that:

If Applicant feels that a stream of pulses is a means, it would appear that the claims are "single means". Since the only means is a pulse stream.

Applicant does not feel that the stream of pulses is a means. The "single means" rejection applies to only inventions claimed as a single means under 35 U.S.C. § 112, ¶6. None of the pending claims rejected under 35 U.S.C. § 101 contains any means-plus-function limitations, and therefore a rejection for a "single means" claim is inapplicable.

It is not clear whether any claim is rejected as being drawn to a single means. To the extent that the Examiner rejected any of the pending claims as being drawn to a single means, such a rejection should be withdrawn because there is no means-plus-function limitation in any claim that could constitute a single means claim.

As to claim 10, the Examiner indicated that claims drawn to both an apparatus and the method of using the apparatus should be rejected under 35 U.S.C. § 101 "based on the theory that the claim ... embraces or overlaps two different statutory classes of invention. Id. at 1551."

Applicant does not understand the Examiner's point here, and is surprised that the Examiner advanced such an ancient and long-discarded position. The current guidance of the MPEP is:

To properly determine whether a claimed invention complies with the statutory invention requirements of 35 U.S.C. § 101, Office personnel should classify each claim into one or more statutory or nonstatutory categories. (MPEP 2106(IV)(B), first paragraph, emphasis appears in the original).

In addition, the MPEP points out that:

For the purposes of a 35 U.S.C. § 101 analysis, it is of little relevance whether the claim is directed to a machine or a process. The legal principles are the same. (MPEP 2106(IV)(B)(2), first paragraph, citing AT&T v. Excel).

There is no basis in law for a rejection under 35 U.S.C. § 101 when an invention embraces more than one statutory category. If this were so, no product by process claims would ever be patented, and no method claims could ever recite any hardware or machines for performing method steps. The Examiner's position is unlawful, arbitrary, and capricious, and unsupported by any relevant judicial decision.<sup>2</sup>

The Examiner's rejection under 35 U.S.C. § 101 of claim 10 for embracing more than one statutory category should be withdrawn.

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<sup>2</sup> Applicant notes with interest the Examiner's reliance on *Ex Parte Lyell* in paragraph 7 of the Office Action. Perhaps the "Id at 1551" was meant to refer to this decision. The *Lyell* decision carries less authority than the recent United States Court of Appeals for the Federal Circuit decisions holding to the contrary, such as at the AT&T v. Excel case.

The rejection under 35 U.S.C. §112, ¶1.

The Examiner rejected various claims under 35 U.S.C. §112, ¶1 for lack of an enabling disclosure. The Examiner felt that the specification does not teach how the signal is provided. The Examiner recognized that the present application teaches an improvement over a prior art system, but asserted that it is unclear how the prior art could be modified to provide the claimed signal.

The specification does not have to enable the person on the street, or even the Examiner to make or use the invention. The specification has to enable the artisan of ordinary skill to make and use the invention. The artisan of ordinary skill would recognize that a transmitter is used to make the signals. It is within the skill of the artisan of ordinary skill to modify a transmitter to produce signals of the kind mentioned in the rejected claims, once the idea is provided to them.

This field is well-understood and mature. Applicant finds it inconceivable that one of ordinary skill in this field, if asked to carry out the invention *after reading Applicant's specification*, would be stymied. Would such a person not know to use a transmitter?

The prior art Wilklins paper teaches NRZ modulation by applying a three-state electrical signal to the RF input of a Mach-Zender modulator, which results in an intensity-modulated binary optical signal with a relative phase difference between two non-null intensity states is  $\pi$ . The claim relates to a stream of RZ pulses (instead of NRZ), where the relative phase difference between two non-null intensity states is in the range from  $2\pi/3$  to  $4\pi/3$  (instead of  $\pi$ ). The artisan of ordinary skill knows how to use a Mach-Zender modulator to produce the kind of signal as in Wilklins and also the kind of signal set forth in the claims now erroneously rejected for lack of enablement.

The rejection under 35 U.S.C. §112, ¶1 should be withdrawn for the foregoing reasons.

The use of a Mach-Zender modulator seems to be unfamiliar to the Examiner. The Examiner may wish to refer to a text for a college course that deals with the subject:  
<http://snow.stanford.edu/~mukul/ee235.pdf> (refer to chapter 14 in particular).

Drawings

A drawing is not thought to be necessary in this application.

Applicant sees no need for a drawing, but encloses a proposed drawing figure to satisfy the Examiner's requirement for a drawing. It is respectfully submitted that the drawing contains no new matter. If the Examiner finds the proposed new figure acceptable, Applicant will provide a formal drawing and also make the appropriate changes to the specification to refer to the drawing, including the addition of a Brief Description of the Drawing section.

Applicant respectfully requests the Examiner to withdraw the objection to the drawings and to approve the proposed new drawing figure.

Rejection under 35 U.S.C. §112, ¶2

The Examiner rejected claim 10 under 35 U.S.C. §112, ¶2 as being indefinite. Indefiniteness means that the artisan of ordinary skill could not read the claim and determine the metes and bounds of the claim. Applicant respectfully submits that an artisan of ordinary skill could in fact read this claim and understand the scope of patent protection sought to be protected. The MPEP, in §2173.05(a), states:

If the claims, read in light of the specification, reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the statute (35 U.S.C. 112, second paragraph) demands no more.<sup>3</sup>

The Examiner has not explained what is indefinite about the claim, and indeed has only complained that more than one statutory class is involved.

The concern with such claims that embrace an article and a method of using the article are expressed in In re Lyell, cited by the Examiner. The concern in that case, however, involved a tool in combination with a method of using the tool. The Board was worried that it would be hard to determine whether someone selling the tool would infringe or not:

Appellant's independent claim 2, in combining two separate statutory classes of

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<sup>3</sup> Page 2100-147 of the MPEP Rev. 2, July 1996; right-hand column, lines 25-30; citing with approval Shatterproof Glass Corp. v. Libbey Owens Ford. Co., 758 F.2d 613 (Fed. Cir. 1985).

invention in a single claim, in our opinion, would raise serious questions for a manufacturer or seller of a tool like that claimed by appellant regarding infringement. Such a manufacturer or seller would have no indication at the time of making or selling a workstand of the structure set forth in appellant's claim 2 whether they might later be sued for contributory infringement because a buyer/user of the workstand later performs the appellant's claimed method of using the workstand. We therefore find that appellant's claim 2 is not sufficiently precise to provide competitors with an accurate determination of the "metes and bounds" of protection involved so that an evaluation of the possibility of infringement may be ascertained with a reasonable degree of certainty ...

Here, claim 10 is dependent. There is no question here as in the Lyell case. In Lyell, selling the manufacture (the tool) might or might not constitute part of an infringing act, depending on what was done with the manufacture. In the present case, making or using the manufacture (the stream of pulses) does constitute an infringing act, without regard to any other claim. Furthermore, if each pulse has a constant phase, claim 2 (2/1) is clearly infringed. Furthermore, as to claim 10 (10/2/1), it is clear that reversing the phase of each new pulse and transmitting the pulses is an infringing act.

The concerns of the Board of Patent Appeals and Interferences in Lyell are not present here. Here, the artisan of ordinary skill is sufficiently precise to provide competitors with an accurate determination of "metes and bounds" of protection involved.

Lyell does not create a bright line rule that all claims embracing more than one statutory category are indefinite. Instead, Lyell simply means that sometimes a claim embracing more than one statutory category may be indefinite if the artisan of ordinary skill cannot tell whether making the manufacture subjects the manufacturer to infringement or not.

Since the language of the rejected claim would reasonably apprise an artisan of ordinary skill as to its scope, Applicant respectfully submits that the claim meets the requirements of 35 U.S.C. § 112, ¶ 2. Therefore, Applicant respectfully requests the Examiner to withdraw this rejection of dependent claim 10.

The Examiner's inability to search the prior art.

The Examiner thought the claims so indefinite that the prior art could not be searched, because the Examiner could not determine what was being claimed.

Applicant respectfully submits that the Examiner should already have searched the prior art. It is clear what Applicant claims. Applicant claims a stream of pulses that meet the requirements of independent claim 1. Applicant claims a method that meets the requirements of independent claim 13. The independent claims are broad, but breadth does not mean indefiniteness. The claims are plenty clear.

The prior art search should not be avoided by the Examiner merely because the Examiner does not understand the claims, when the claims could be readily understood by an artisan of ordinary skill. If the claims were unintelligible or gibberish, there would be a good reason for the Examiner to not even attempt a search. The claims are clear, however, and written to the level of one of ordinary skill, and Applicant sees no reasonable explanation for the Examiner's further delaying the prior art search.

Conclusion and request for telephone interview.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

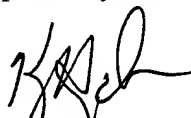


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Respectfully submitted,



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